The Perchlorate Contamination Challenge: EPA's Part in Pro-Active Partnership

William H. Farland, Ph.D.
Director
National Center for Environmental Assessment
U.S. EPA

Perchlorate Stakeholders Forum
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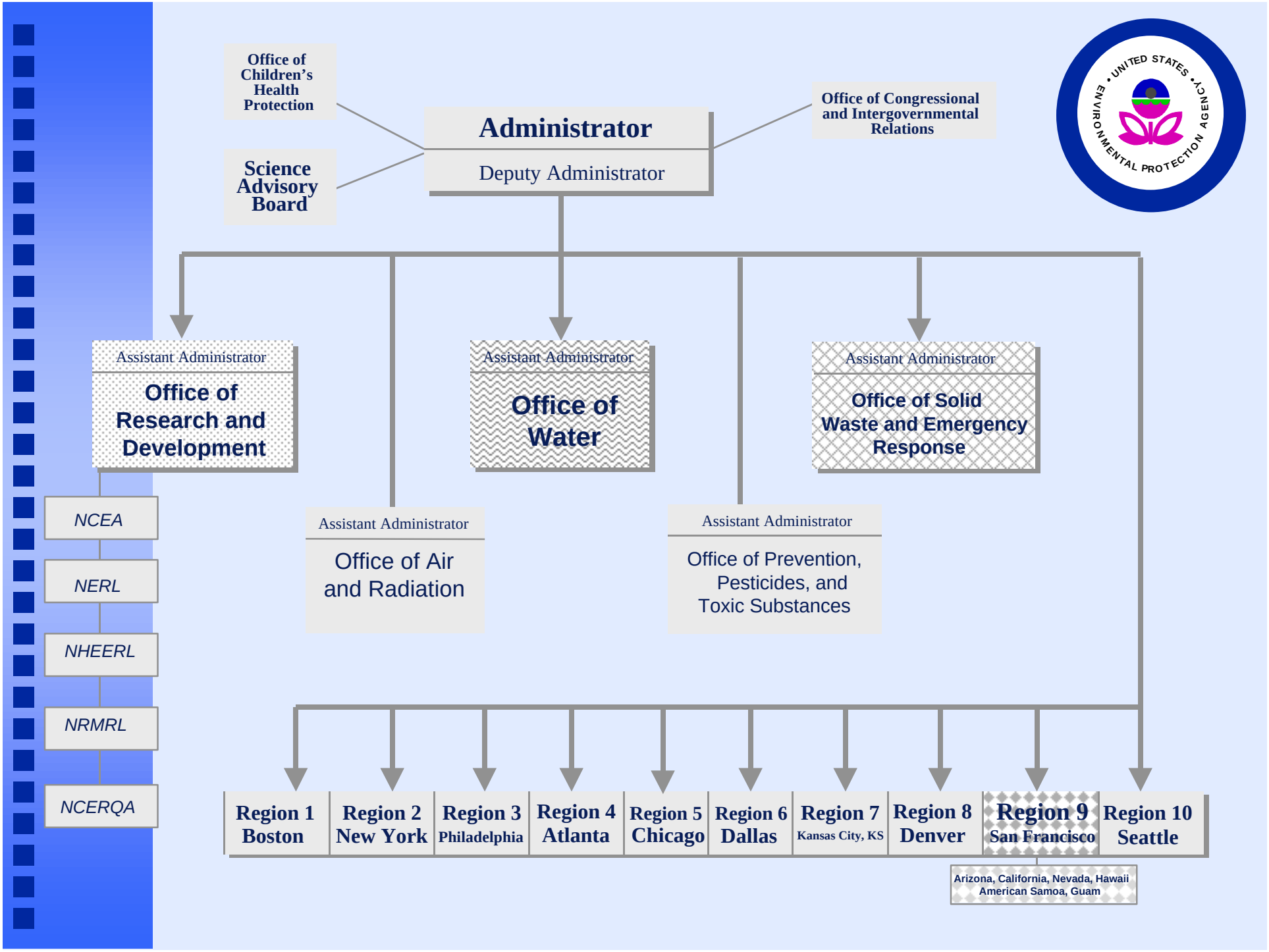
Perchlorate-tainted wells spur government action

The discovery in 1997 of perchlorate-contaminated drinking water in the western United States has spurred an interagency federal task force to tackle the health implications of this finding. The belief that perchlorate could be detrimental to humans at levels found in some sources throughout the United States is driving the action, but the work is challenging. In addition to the paucity of environmental fate and toxicity information on perchlorate, there is, as yet, no proven method for removing the compound from water.

Perchlorate, a primary ingredient in solid rocket fuel, must be regularly replaced in the nation's missile and rocket inventory. It is a contaminant in groundwater and surface waters in 14 states. (Courtesy NASA)

Environmental Science and Technology / News May 1, 1998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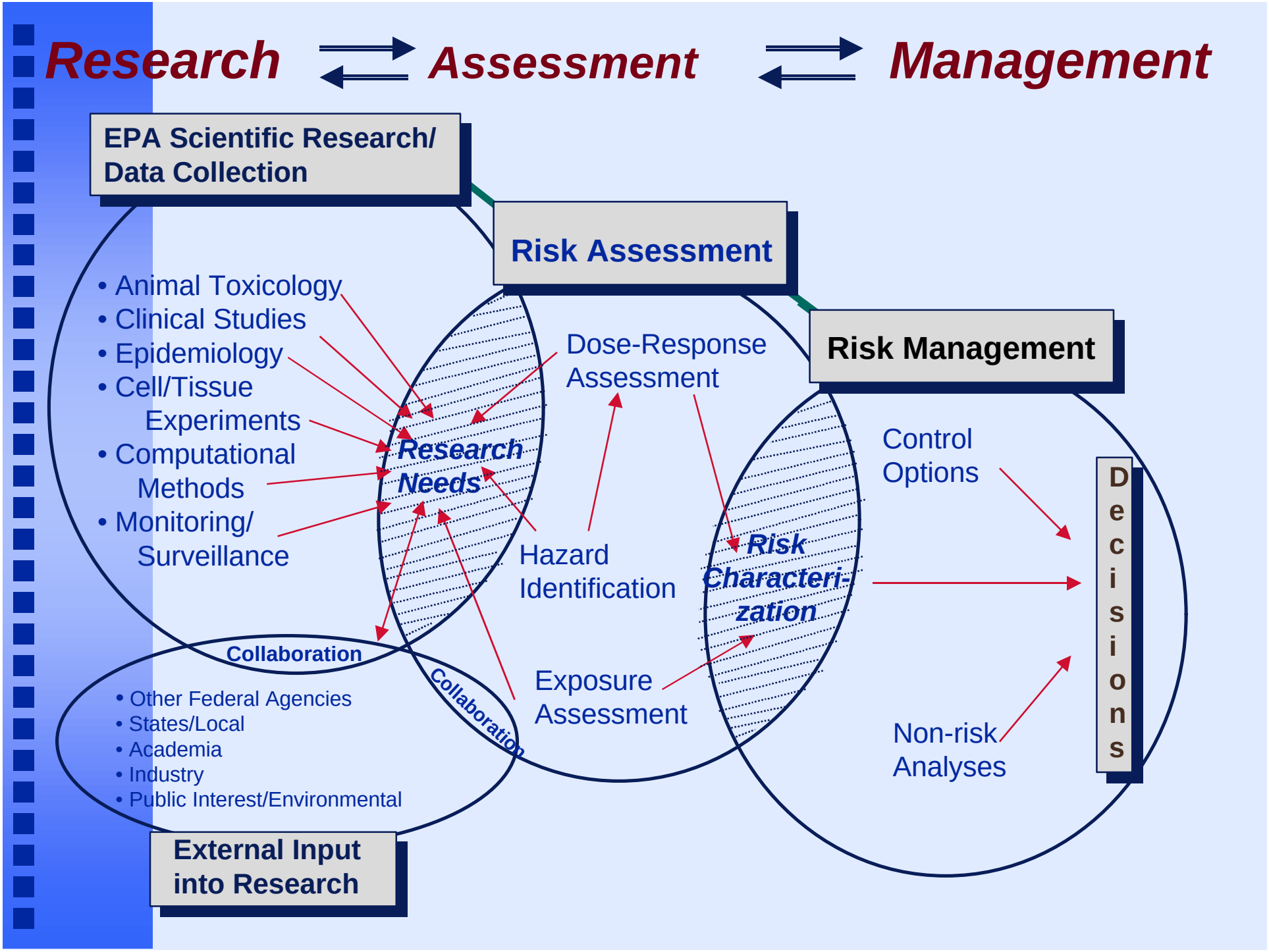
Region 10 Seattle


Research
Assessment
Management
EPA Scientific Research/
Data Collection
Risk Assessment
Risk Management
• Animal Toxicology
• Clinical Studies
• Epidemiology
• Cell/Tissue
Experiments
• Computational
Methods
• Monitoring/
Surveillance
Research
Needs
Dose-Response
Assessment
Hazard
Identification
Risk
Characteri-
zation
Exposure
Assessment
Control
Options
Non-risk
Analyses
Decisions
Collaboration
Collaboration
• Other Federal Agencies
• States/Local
• Academia
• Industry
• Public Interest/Environmental
External Input
into Research

Risk Assessment is an Iterative Process

Continued Improvement

- Provisional RfD (1992, 1995) - Superfund Technical Support Center, NCEA-Cin
- Revised RfD (September 1998) - NCEA
- Refinements as required in the future

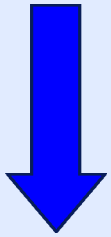
The Perchlorate Contamination Challenge

Pro-Active Partnership

- Unprecedented timeframe
- Targeted expertise

The Perchlorate Contamination Challenge

Credible Science



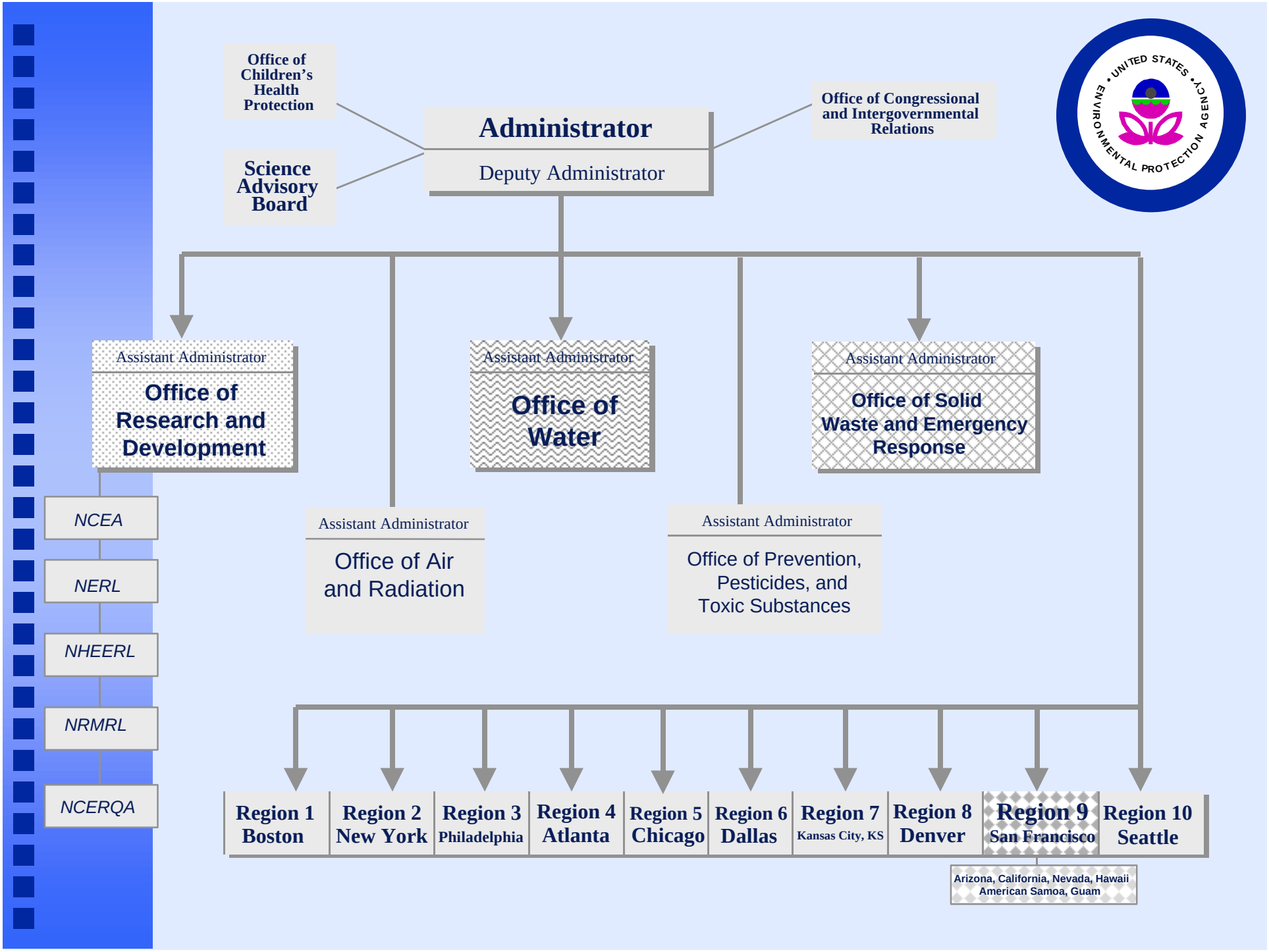
Credible Decisions

- Accurate risk characterization
- Appropriate management strategies

The Perchlorate Contamination Challenge:

An Integrated Approach

- Occurrence survey
- Stakeholder issues
- Health effects / toxicology
- Analytical methods (Detection Limit)
- Ecological impact / transport & transformation
- Treatment technology
- Technology transfer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Recent Emphasis Focuses on the Development and Use of Better Data

"The quality of risk analysis will improve as the quality of input improves. As we learn more about biology, chemistry, physics, and demography, we can make progressively better assessments of the risks involved. Risk assessment evolves continually, with re-evaluation as new models and data become available."

"Science and Judgment in Risk Assessment" (National Research Council, 1994)